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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,423	09/19/2003	Blas Frangione	05986/100K433-US2	8605
7278 7590 02/23/2007 DARBY & DARBY P.C. P. O. BOX 5257 NEW YORK, NY 10150-5257			EXAMINER GAMETT, DANIEL C	
			ART UNIT	PAPER NUMBER
			1647	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/666,423	Applicant(s) FRANGIONE ET AL.	
	Examiner Daniel C. Gamett, PhD	Art Unit 1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-15, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendments of 11/21/2006 have been entered in full. Claims 1-9 and 16-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention. Claims 10-15, 21, and 22 are under examination.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Claim Rejections - 35 USC § 103

3. Rejection of claims 10-15, 21, and 22 under 35 U.S.C. 103(a) as being unpatentable over US Patent 6866849 ('849), in view of Ghanta *et al.*, 1996, J. Biol. Chem. 271(47):29525-29528, US Patent 6962707 ('707), and Maillere *et al.*, 1995, Molecular Immunology 32(17/18): 1377-1385, is maintained. Applicant's arguments filed 11/21/2006 have been fully considered but they are not persuasive. Applicant first points out that the '849 patent does not teach or suggest the synthetic of A β peptides of the instant claims. The '849 patent is relied upon to teach the benefit of immunization with an N-terminal peptide of A β (A β 1-39), which comprises the peptides of the instant claims. The benefit of immunization with an N-terminal peptide of A β is also taught in the '707 patent. The rejection holds that Ghanta cited earlier work to teach that the unmodified N-terminal peptide of A β forms neurotoxic aggregates. Thus, in view of the '849 patent and Ghanta (and references cited therein), the skilled artisan is confronted with the same problems as the inventor (as per Applicant's page 10 citation of

In re Rouffet) in seeking to evoke an immune response with an immunogen that is intrinsically toxic. Ghanta is relied upon to suggest modification of the A β N-terminal peptide with lysine hexamers to reduce neurotoxicity associated with the unmodified N-terminal peptide of A β . Thus, Applicant's argument (pages 7-9) that Ghanta does not teach different or longer sequences of amino acids from A β than the 10 amino acids sequences described as H1 and H2, is not persuasive because Ghanta is not relied upon for such a teaching. Longer sequences are obvious in view of the '849 and '707 patents.

4. Applicant asserts that the '707 patent, considered alone, does not render the claimed peptides obvious. The instantly claimed peptides are included within the larger peptides disclosed in the '849 and '707 patents. As noted, the '707 patent teaches polyaminoacids at either the N- or C-terminus of an immunogenic peptide. Absent unexpected results, it would be obvious to use any subset of these peptides as immunogens. The reduced fibril formation and toxicity observed for the instantly claimed synthetic peptides is not attributed to the exact boundaries of the amino acid sequences used. Furthermore, these results are not unexpected, but are predicted by Ghanta.
5. Applicants argue (page 9) that Maillere describes only a general procedure and does not disclose the procedure of C-terminal amidation for use with A β peptides. Maillere was not relied upon for a specific teaching of use with A β peptides. The rejection of record holds that Maillere teaches that C-terminal amidation decreases proteolytic degradation of peptides and enhances the capacity of the peptide to activate lymphocytes. To further emphasize the point, consider the following excerpts of the Maillere abstract: "Acetylation at the N-terminus as well as amidation at the C-terminus enhanced the capacity of the peptide to

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activate T cells... Together, our data indicate that (i) the T cell stimulating capacity of a peptide is associated with its lifespans in the free and MHC II bound states; and (ii) these lifespans can be greatly enhanced by introducing fine chemical modifications at N- and C-termini. These data may have some implications in designing more potent peptidic immunomodulators." Following Maillere's strong suggestion, the skilled artisan seeking to evoke an immune response to A β peptides would expect that C-terminal amidation would be an advantageous modification.

Conclusion

6. No claims are allowed.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C Gamett, Ph.D., whose telephone number is 571 272 1853. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571 272 0961. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCG

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5 February 2007


BRENDA BRUMBACK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600